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INSECT AND DISEASE REPORT

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AN EVALUATION OF DOUGLAS-FIR BEETLE INFESTATIONS IN AN AREA OF BLOWDOWN ON THE CANYON FERRY DISTRICT, HELENA NF, MONTANA

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by

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An extensive area of blowdown occurred during July 1970 in Douglas-fir stands on the Canyon Ferry District, Helena National Forest, Montana. Approximately 600 acres of blowdown occurred in the Magpie drainage and 1,500 acres in the Trout Creek drainage (Fig. 1). The volume of blowdown in these areas was estimated at 1.5 million board feet. The area was examined during October 1971 to determine the potential for Douglas-fir beetle, Dendroctonus pseudotsugae Hopk. infestations in residual stands in this area.

The evaluation showed that trees under 14 inches in diameter, in exposed areas, were too dry to be attacked, and that only the larger diameter trees, in shaded areas, contained Douglas-fir beetle brood. Very few standing green trees were attacked in the Magpie drainage in 1971. Only three 1971 attacked trees were found in the five beetle spots checked within the blowdown area. Evidently the beetles preferred the blowdown to standing trees.

The District has an active timber sale in the Magpie drainage and most of the material in the sale area will be logged this year. A salvage program was started in 1970 immediately after the blowdown was detected and is almost completed. Two blocks in the sale area containing blowdown will not be logged until next year, however, the stand is located at an elevation above 6,000 feet and snow will not permit logging until July. Beetles from infested logs in these blocks will emerge and attack either blowdown, or standing green trees next year. Some of the blowdown is still green and has not been attacked by Douglas-fir beetle. This material may

provide a source next year to absorb the present population. If, however, there is not sufficient blowdown to absorb the population, standing green trees may be attacked. There are scattered trees containing brood which will not be removed by logging. The brood in these trees poses an immediate threat to surrounding trees.

An area in the Magpie drainage with decadent Douglas-fir was evaluated to determine the cause of tree mortality. The major insect activity was by flatheaded wood borers (Family Buprestidae). Past budworm defoliation, in combination with old age, probably contributed to the deterioration of this stand and mortality will probably continue for several years.

An evaluation will be made next year to determine if the Douglas-fir beetle has attacked standing green trees, or was absorbed into the remaining blowdown.

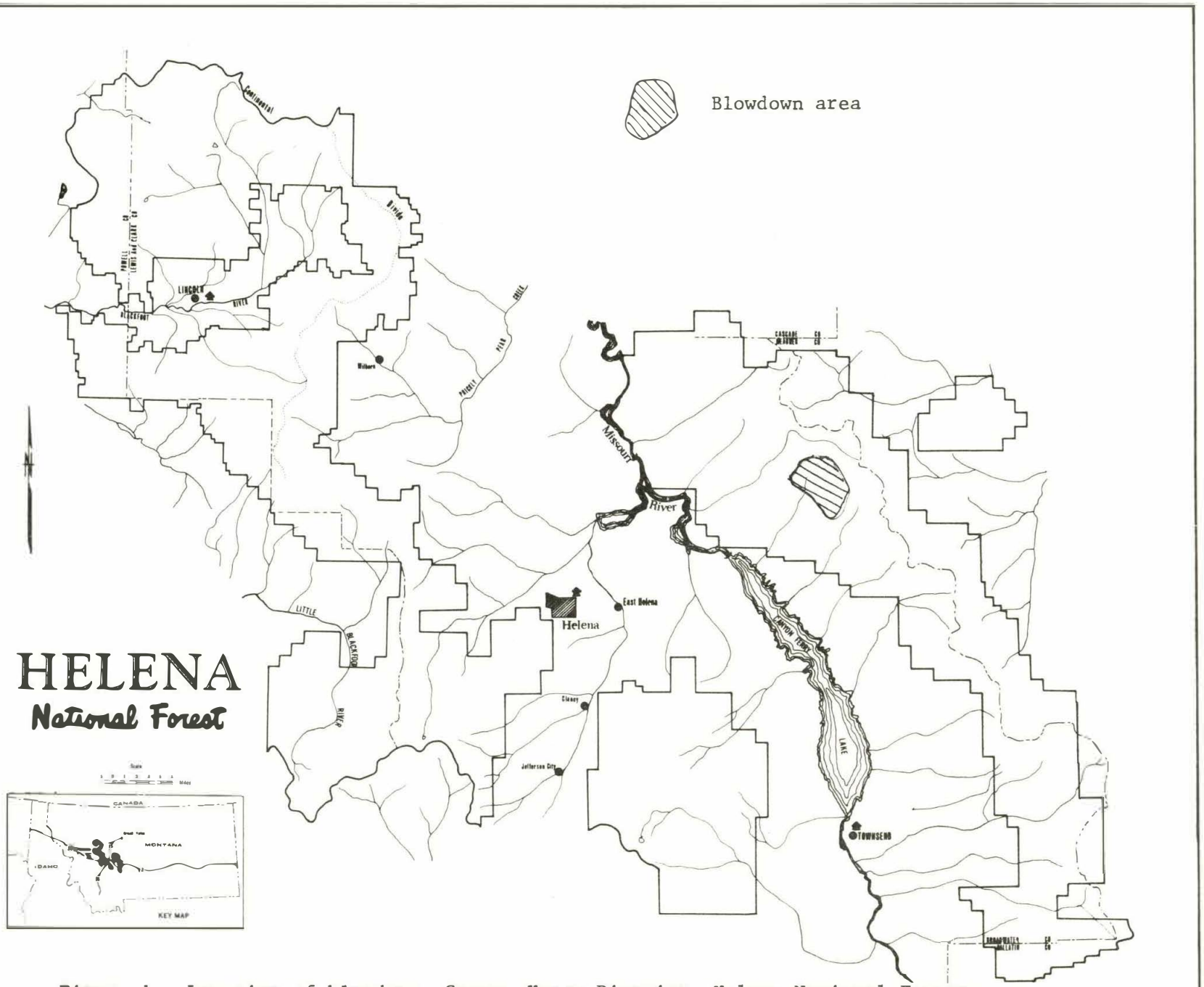

Figure 1.--Location of blowdown, Canyon Ferry District, Helena National Forest